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Two new records of microfungi from the Brazilian Atlantic Forest

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Abstract— Two microfungi, *Linodochium sideroxyli* and *Leptodiscella africana*, are recorded for the first time from Brazil. The specimens, collected on decaying leaves in natural areas of the Brazilian Atlantic Forest, are described and illustrated.

Key words— taxonomy, conidial fungi, tropics

Introduction

Linodochium Höhn. (Höhnel 1909, Dyko & Sutton 1979, Li et al. 2013), typified by *L. hyalinum*, comprises five species characterized by cupulate, superficial, separate or confluent, and yellow, orange, or white sporodochial conidiomata, closely packed branched conidiophores, and polyblastic, denticulate, sympodially extended conidiogenous cells. The conidia are solitary, cylindrical or falcate, septate, and hyaline (Castañeda-Ruiz & Kendrick 1990a, Li et al. 2013).

The genus *Leptodiscella*, introduced by Papendorf (1969) and typified by *L. africana*, is distinguished by mono- or polyblastic, denticulate, sympodially extended conidiogenous cells and solitary, cylindrical to oblong, 1-septate, hyaline conidia with a subpolar, filiform appendage at each cell. *Leptodiscella* comprises four species (Madrid et al. 2012).

During three mycological surveys of conidial fungi occurring on leaf litter from the Atlantic rainforest, the microfungi *Linodochium sideroxyli* and *Leptodiscella africana* were found and recorded for the first time in Brazil.

Material & methods

Samples of leaf litter were placed in paper and plastic bags, taken to the laboratory, and treated according to Castañeda-Ruiz (2005). Mounts were prepared in PVL (polyvinyl alcohol and lactic acid) and measurements were taken at ×1000. Micrographs were obtained with a Nikon microscope (model Eclipse Ni-U) with bright field and DIC optics. Specimens were deposited in the Herbarium of Universidade Federal de Pernambuco, Recife, Brazil (URM).

Taxonomy

Linodochium sideroxyli Dulym., P.M. Kirk & Peerally,
Mycotaxon 73: 317. (1999). FIG. 1A–D

COLONIES on the natural substrate sporodochial, cupulate or pulvinate, scattered, amphigenous, yellow, 300–550 µm diam. Mycelium superficial and immersed, composed of septate, branched, smooth, hyaline hyphae, 1–3 µm diam. CONIDIOPHORES distinct, branched, erect or flexuous, strongly geniculate above, numerous, tightly aggregated, 1–3-septate, smooth, hyaline, 25–50 × 2–4 µm. CONIDIOGENOUS CELLS polyblastic, discrete, terminal, indeterminate, long sympodial elongated, with broad, flat-topped denticles forming a geniculate rachis, hyaline, 15–30 × 2–4 µm. Conidial secession schizolytic. CONIDIA solitary, cylindrical-filiform, slightly inequilateral, basal cell 1 µm wide, apical cell 1.5–2 µm diam., hyaline, smooth, 0–1-septate, mostly 1-septate, with very thick and refractive walls at each end, truncated at the base, rounded at the apex, 33–40 × 1.5–2 µm

SPECIMENS EXAMINED: **BRAZIL. PERNAMBUCO: Cabo de Santo Agostinho,** Refúgio de Vida Silvestre Matas do Sistema Gurjaú, 8°13′S 35°03′W, on decaying leaf of an unidentified plant, 12-XI-2014, coll. M.A. Barbosa (URM 87703); **Abreu e Lima,** Mata de Monjope, 7°52′S 34°55′W, on decaying leaf of an unidentified plant, 30-III-2015, coll. M.A.G. Araújo (URM 87704).

NOTE: The Brazilian specimens have shorter conidia than those of the type material (32–48 µm long; Dulymamode at al. 1999) but otherwise fit well the original description.

Leptodiscella africana (Papendorf) Papendorf,
Trans. Br. Mycol. Soc. 53: 146 (1969). FIG. 1E–H

CONIDIOMATA on the natural substrate sporodochial, scattered or confluent, white. Mycelium superficial and immersed, compose of septate, branched, subhyaline hyphae, 1–1.5 µm diam. CONIDIOPHORES distinct, erect or prostrate, subhyaline, 0–2-septate, ≤25 µm long, sometimes reduced to conidiogenous

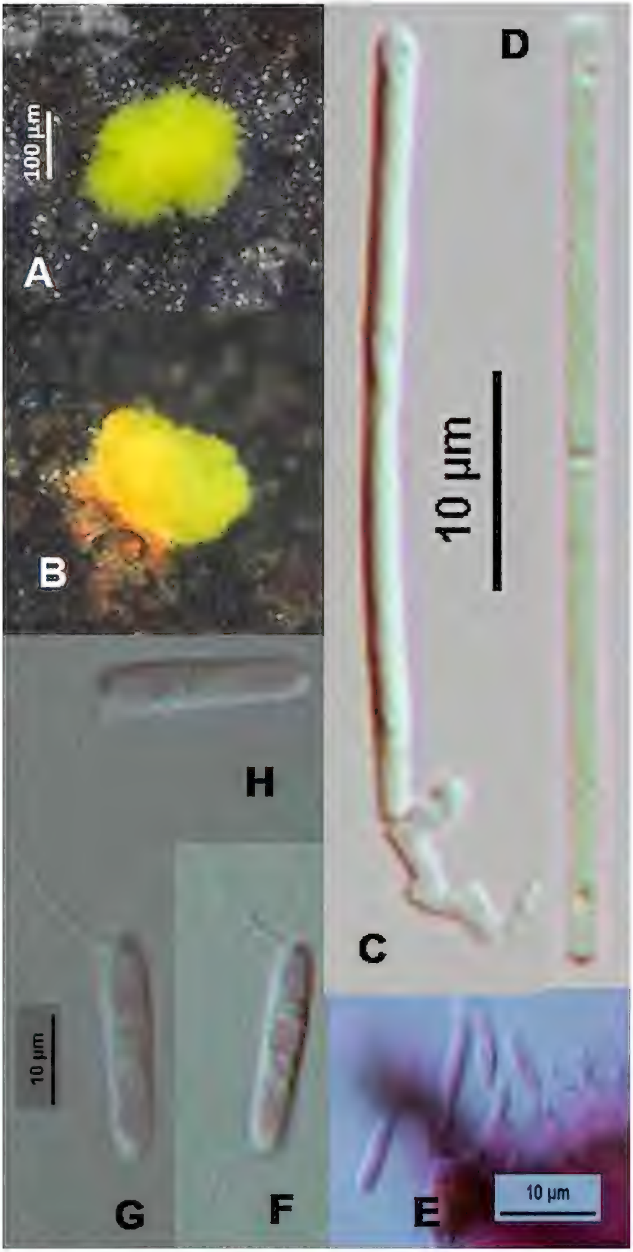

Fig 1. ***Linodochium sideroxyli*** (URM 87704): A, B. Sporodochia on the natural substratum. C. Conidiogenous cell and conidium. D. Conidium ***Leptodiscella africana*** (URM 86557): E. Conidiogenous cells and conidia. F–H. Conidia.

cells. Conidiogenous cells mono- and polyblastic, terminal and intercalary, sympodial extended, cylindrical or irregular, subhyaline, smooth, 5–10 × 1–2 µm. Conidial secession schizolytic. Conidia solitary, cylindrical or oblong, 1-septate, rounded or slightly obtuse at the ends, sometime somewhat truncate at the base, hyaline smooth, 12–18 × 2–3 µm, with a filiform, subpolar appendage at each end, 6–8 µm long.

specimen examined: **BRAZIL. Pernambuco: Cabo de Santo Agostinho,** Refúgio de Vida Silvestre Matas do Sistema Gurjaú, 8°13′S 35°03′W, on decaying leaf of an unidentified plant, 12-XI-2014, coll. M.A. Barbosa (URM 86557).

Note: The original description of *Leptodiscella africana* was derived from a pure culture on potato-carrot-agar (Papendorf 1967, 1969); however, the conidial sizes in the type material (11–17.5 × 2–3 µm) are almost the same as in the Brazilian specimen, although the subpolar conidial appendages from the type are slightly longer than from the Brazilian specimen (6.5–13 µm).

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